

ABSTRACT

There is disclosed an ink jet printhead which comprises a plurality of nozzles 3 and one or more heater elements 10 corresponding to each nozzle 3. Each heater element 10 is
5 configured to heat a bubble forming liquid 11 in the printhead to a temperature above its boiling point to form a gas bubble 12 therein. The generation of the bubble 12 causes the ejection of a drop 16 of an ejectable liquid (such as ink) through an ejection aperture 5 in each nozzle 3, to effect printing. The heat energy difference between an ejected drop of the ejectable liquid and an equivalent volume of the ejectable liquid supplied to the nozzle to
10 replace the ejected drop, is substantially equal to the electrical energy required by the heater and the drive circuitry to eject the drop.

Using this configuration, the printhead is thermally isolated in that it dissipates heat without the need for an additional heat sinking system. This allows the spacing between
15 nozzles to be decreased thereby improving nozzle density and print quality. It also permits the print speeds to be maintained without unintentionally boiling the ink in nozzles with insufficient cooling.

Fig. 4